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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,111	03/14/2001	Neo Chee Peng	M4065.0394/P394	1491

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EXAMINER

ASHLEY, BOYER DOLINGER

ART UNIT PAPER NUMBER

3724

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/805,111	Applicant(s) PENG, NEO CHEE	
	Examiner Boyer D. Ashley	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to applicant's amendment filed 9/16/04, wherein claims no claims were amended.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. The drawings were received on 9/16/04. These drawings are approved.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 307, 509, hereinafter EP '509, in view of Saito et al., U.S. Patent 6,080,263.

EP '509 discloses the invention substantially as claimed, including a support (108) for holding a wafer having a protective tape thereon; a cutting element (65/103/105) placed at a first predetermined distance from the support for moving relative to the support; a sensor (90/110) for sensing (column 2, lines 10-15) abnormalities cutting step; and a circuit (inherent if there is a sensor) for controlling the operation of the device, including stopping the operation of the device upon detection of an abnormality.

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EP '509 does not specifically disclose that the sensor detects if the tape is properly removed or not; however, Saito et al. discloses that it is old well known in the art that tape burrs formed during the tape cutting step ultimately destroy the wafers during the back grinding step. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the sensor of EP '509 to check to see if a tape burr was formed on the wafer and for causing the control to prevent the wafer from being transported to the back grinding device if a burr is detected.

It should further be noted that the phrase "for moving the ... removed" is merely intended use not defining any specific structure. Furthermore, there is no back grinding device positively recited and is not part of the invention. Therefore, the transport mechanism of EP '509 need only be capable of transporting the wafer to a back grinding device. In this case, the conveyor belts are fully capable of being arranged to be used with a back grinding device.

As to claims 2 and 4, the circuit of the modified device of EP '509 is capable of initiating actions by stopping the cutting operation; by stopping further movement of the wafer to a grinding area; and by preventing back grinding.

As to claim 5, the sensor of EP '509 is a mechanical sensor, in that, the all sensor have some mechanical elements.

As to claim 8, the sensor of EP '509 is behind the cutting element because it is the only location that allows for detecting action by the cutting element.

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As to the phrases "the circuit for ... apparatus" (claim 2), "the circuit for ... area" (claim 3), "the circuit ... the wafer" (claim 4) do not serve to further limit the claims because it is merely functional/intended use not defining any specific structure.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP '509 in view of Saito et al.

The modified device of EP '509 discloses a first predetermined distance but is silent as to the specific distance of 0.5 mm from the edge of the wafer. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the predetermined distance of 0.5 mm in order to facilitate the sensor's ability to sense based on the tolerances of the sensor, because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Response to Arguments

7. Applicant's arguments filed 9/16/04 have been fully considered but they are not persuasive.

Applicant contends that above references lack the specific claim language "a sensor for detecting ... properly removed by said cutting element" and "a circuit for initiating ... element". However, it should be noted that these phrases are clearly intended use recitations without any specific structure and only require the prior art to be capable of the intended uses of the sensor and circuit. See MPEP 2111.01. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

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In this case, as the applicant points out on page 2 of their remarks, Matsushita discloses a sensor 90 and sensor 110 both of which are photoelectric detectors. These sensors in Matsushita have different purposes or rather intended uses but it cannot be argued that they are not capable of sensor a piece of tape hanging from the edge of a wafer because there are photoelectric detectors. Photoelectric detectors are old and well known for sensing obstructions in their immediate paths. The question isn't what the sensors are being used for in Matsushita but rather are they capable of the same intended use as claimed in the instant application. The motivation for use the sensors of Matsushita in a different manner comes of Saito wherein it is disclosed that it is necessary to prevent wafers with tape burrs from being permitted from continuing to the backgrinding apparatus because such situations inevitable cause damage.

Alternatively, Matsushita meets the intended use phrase of claim 1 of the instant application because Matsushita's sensors are used to determine if improper cutting has occurred by sensing the peripheral edge of the wafer, for example, chips. That is if the sensors of Matsushita detect improper cutting, i.e. chips, then the protective tape on a wafer is clearly improperly removed because cutting the tape does not include cutting the wafer. Nothing in the claim language specifies any specific structure or relationship for the sensor. How is the sensor of claim 1 any different from the sensor of Matsushita other than the intended use of the sensors?

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8. For the reasons above, the grounds of rejection are deemed proper.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

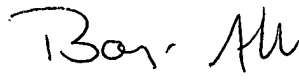
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boyer D. Ashley whose telephone number is 571-272-4502. The examiner can normally be reached on Monday-Thursday 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Boyer D. Ashley
Primary Examiner
Art Unit 3724

BDA
November 30, 2004